

MD iMap Technical Committee Meeting Minutes

Place: Department of Planning (MDP): Olmstead Room, 11th Floor (Baltimore, MD)
Date: 4/2/13
Time: 1:00PM – 3:00 PM
Attendees: Shelly Aprill (MDP), Andrew Bernish (MDP), Jim Cannistra (MDP), Kevin Coyne (DNR), Bill Fearington (DHR), Julia Fischer (DoIT), Matt Folley (MDP), Jason Keppler (DoIT), Renee King (MDP), Lisa Lowe (DoIT), John Madigan, Russell Provost (DoIT/ESRGC), Matt Sokol (DoIT) and Mussie Tewolde (DJS)
Phone Attendees: Ashley Buzzeo (CGIS), Dustin Henry (KCI Technologies, Inc.), Chris McGovern (Montgomery County), Kate Majchrzak (MDE), Anthony Puzzo (Esri), Frank Siano (MDE) and Brad Wolters (DHCD)

AGENDA:

- Introductions 1:00 – 1:10
- CityEngine – *Shelly Aprill & Matt Folley* 1:10 – 1:40
- MD ELA Statistics Update 1:40 – 1:45
- Data & Resources Subcommittee Updates 1:40 – 1:40
 - Addressing Initiative Updates – *Russell Provost*
 - Cascading Geocoder – *Russell Provost & Ashley Buzzeo*
- Outreach Subcommittee Updates 2:00 – 2:10
- Application Subcommittee Updates 2:10 – 2:20
 - MD iMap Application Template Update 2:20 – 2:30
- Security Policy/Discussion – *Barney Krucoff* 2:30 – 2:40
- Additional Business 2:40 – 3:00

NEW ACTION ITEMS:

Description:	Date Assigned:	Follow Up By:
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ON-GOING ACTION ITEMS:

Description:	Date	Follow Up
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	Assigned:	By:
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APPLICATION SUBCOMMITTEE ACTION ITEMS:

Description:	Date Assigned:	Follow Up By:
USDOT Cloud Utilization Survey <ul style="list-style-type: none"> • USDOT has been briefed • Mike Sheffer and Kaushik Dutta to attend a USDOT workshop this summer and report back what they learn • Send acceptance to USDOT, we are on the second tier list of user's discussion. No further communication • Phone conversation with them to start 	Updated: 4/2/13 1/15/13 Submitted: 11/20/12	Kaushik Dutta & Barney Krucoff
Geocortex <ul style="list-style-type: none"> • Request DoIT contractors explore and report back to the group concerning the raw code and opportunities for modification 	Submitted: 1/15/13	DoIT GIO Office
How to consume Socrata services in MD iMap <ul style="list-style-type: none"> • Python script being coded and tested on some transportation and MDA data which has been uploaded to Socrata, more details to follow • Test the potential for automated updates using available .xml feeds or other resources out of Socrata and report back to the group 	Updated: 2/5/13 Submitted: 1/15/13	Kristen Ahearn, Kaushik Dutta & Jason Keppler
Google Map Engine <ul style="list-style-type: none"> • Have decided to change the plan and go with Arc2Earth tool instead • Negotiate with Google through the existing Google contract with DoIT 	Updated: 4/2/13 Submitted: 9/4/12	GIO
SwGi/Version 10.1 Migration <ul style="list-style-type: none"> • MD iMap infrastructure being kept at Esri Version 10.0 at present • DoIT providing a server for development at Esri Version 10.1 at present • Meeting scheduled w/Amazon for Wed. 9/5/12 • 10.1 migration anticipated by January 2013 by CGIS • 1 meeting at CGIS • Not yet created design • Invite Esri to participate in a design session 	Updated: 11/20/12; 9/4/12; 7/17/12; 3/23/12 Submitted: 3/6/12	GIO
Application Submission Procedures <ul style="list-style-type: none"> • Update detailed procedures for application creation and update • Resend Application Submission Procedures draft to Technical Committee (Co-chairs) 	Submitted: 6/21/11	Technical Committee

DTA & RESOURCES SUBCOMMITTEE ACTION ITEMS:

Description:	Date Assigned:	Follow Up By:
REST Endpoint Service Descriptions <ul style="list-style-type: none"> • Any changes that need to be made to these descriptions or legends should 	Submitted: 12/20/11	MD iMap Service Data

be submitted to Ashley Buzzeo		Owners
<p>WFS-Enabled OSPREY Services</p> <ul style="list-style-type: none"> • Instructions and list of available WFS-enabled services to be added to Portal early September • Ownership in question • Follow up with owners of OSPREY data to determine if layers can be WFS-enabled 	<p>Updated: 9/4/12; 3/23/12</p> <p>Submitted: 12/6/11</p>	Kenny Miller
<p>GIS/Archives Appraisal Questions</p> <ul style="list-style-type: none"> • Distribute survey to as many municipal, county and state agencies, as possible, for potential participation 	<p>Submitted: 7/5/11</p>	Technical Committee
<p>Feedback/Requests concerning MD iMap</p> <ul style="list-style-type: none"> • Statewide tax map service being developed by MDP – will be made available on MD iMap in future • PFA map service now includes a field “State Eligible” w/ Yes or No • Look to obtain most recent statewide DEM from Salisbury and discuss effort/timeline for generating hillshade and getting posted • Still updating • Add Plat # to parcel • Maybe add address • Add PFA in/out: resistance to this update • Check for hillshade, which can be added as map service, @ MDP • Add Hillshade Service: Inquire at DNR if they have a hillshade available – to check • Add Map/Parcel ID Look-Up: Follow up with requestor (Jason Zhao – MDE) to clarify request 	<p>Updated: 9/4/12; 3/23/12; 10/4/11</p> <p>Submitted: 6/7/11</p>	Jim Cannistra
<p>Cascading Geocoder</p> <ul style="list-style-type: none"> • Anticipate being live within a week or two • Testing going well and anticipate deploying in the near future • The 11 address locators that the composite locator will use are created • Geocoders have been defined, data being collected, geocoders to be created and tested in the upcoming weeks • Research concerning development of composite geocoder underway • Composite geocoder on task list for CGIS FY2013 • Ashley Buzzeo will work with Brad Wolters to determine if this composite geocoder will meet these additional search criteria needs 	<p>Updated: 4/2/13; 3/5/13; 2/5/13; 1/15/13; 12/4/12; 9/4/12</p> <p>Submitted: 1/18/11</p>	CGIS
<p>Web Mercator Data Service Projection</p> <ul style="list-style-type: none"> • DoIT recreating MD iMap map services in 10.1 Web Mercator projection • Need to move projections to Web Mercator • Per MES, EMMA replacement will use Web Mercator projection • Assess costs in labor and storage for creation of MD iMap data services (except imagery) in Web Mercator projection – Will determine with DNR & CSSC (lots of variables: migration to 10, etc.) 	<p>Updated: 11/20/12; 3/6/12; 10/4/11; 4/5/11</p> <p>Submitted: 1/4/11</p>	GIO Office

Metadata Services <ul style="list-style-type: none"> Forward electronic list to group Updated list to be provided by Friday, 1/7/2011 Updated list to be provided at 1/4/2011 meeting Remaining “offenders” actively being pursued Resend email to “offenders” to complete metadata Email resent and follow-up by Kenny Miller to occur MDP has provided metadata for all their services on MD iMap Follow-up concerning how to obtain the missing metadata for services currently being hosted on MD iMap Email sent to Kenny Agency leads from Tech. Comm. to make progress <ul style="list-style-type: none"> Direct contact of data owners A listing of services for which metadata is needed was provided. It was discussed that some metadata may not be available from the data producers. This is especially true for parcel data. Metadata at the service level will be written by MDP for parcel data to go along with the MD iMap refresh process 	Updated: 1/18/11; 1/4/11; 12/21/10; 10/5/10; 8/3/10; 7/12/10; 6/22/10; 5/18/10 Submitted: 4/20/10	Data & Resources Subcommittee Co-chairs
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OUTREACH SUBCOMMITTEE ACTION ITEMS:

Description:	Date Assigned:	Follow Up By:
Twitter/Communication Plan <ul style="list-style-type: none"> List of every CIO for inclusion on email alerts 	Submitted: 11/15/11	GIO
<ul style="list-style-type: none"> Recruit participants Obtain feedback concerning how to improve upon current outreach strategies Email potential new members directly 	Updated: 5/18/10; 4/20/10 Submitted: 3/16/10	Outreach Subcommittee
<ul style="list-style-type: none"> Proactive Marketing of MD iMap 	Submitted: 9/21/10	Outreach Subcommittee

COMPLETED ACTION ITEMS:

Description:	Date Assigned:	Follow Up By:
Data and Resources Subcommittee <ul style="list-style-type: none"> Send out email this week to connect with those who volunteered to be on the Data and Resources Subcommittee 	Submitted: 2/5/13	Lisa Lowe
WFS Services <ul style="list-style-type: none"> Top 10 list to be assembled during next Data & Resources Subcommittee meeting List of enable services, email to group 	Updated: 4/5/11 Submitted:	Data & Resources Subcommittee

	3/15/11	
Cascading Geocoder <ul style="list-style-type: none"> Remove “Marker” from Mile Marker category Add option for interstates to include without space or dash between “I” and number (i.e. I83) 	3/5/13	CGIS
City Engine <ul style="list-style-type: none"> Present City Engine at next Technical Committee Meeting 	3/5/13	MDP

Introductions

Round-the-room

CityEngine (Presentation Available)

- Have been interested in doing 3D analysis for a while now and have looked at different products
 - GoogleEarth, ArcScene and more recently CityEngine
 - Variety of tools available, data will guide which 3D solution is selected
- Baltimore City and a few isolated areas (Silver Spring into the Washington, D.C. area and some areas that Washington College has been working on) are the only parts of Maryland which are 3D in Google Earth
- Google cannot be relied on for 3D availability
- Google Sketch-Up has been used for some site specific work
 - This software has some visualization capabilities, but not ideal for what is trying to be accomplished
- Exploring what is built and what can be built
- Exploring ways to subdivide parcels and place buildings to determine how building will fit in the space
- Have been using ArcGlobe with parcel points and creating symbols which represent buildings, for visualization purposes
 - Might work for some applications, but the buildings are not rotated to align with the streets
 - Some perspective beyond the image itself is necessary
- Looked at draping LiDAR imagery over a 3D terrain
 - Challenges because of the volume of LIDAR data for processing time
 - About 5 million points for the section completed for this demo
- Some work also done with the intensity of the grey-scale/light intensity to extrude features
- Most counties do not have attributed buildings, especially with floors or heights
 - Those that do can be used to extrude, but this is only meeting some needs
- 3D visualization of demographic data is also an interest of MDP
- Concluded that CityEngine would be a good alternative to create a realistic portrayal of the landscape in 3D

Demo Specifics

- Everything is based on Howard County data
 - Building planimetrics – 2D source data
 - Property view data from MDP
- Demo area is from I-95 east to the county boundary in Howard County
- Render the buildings which have footprints for:
 - Assigning building type to the building footprints based on MDPV data
 - Sub-dividing into 7 types of building (industrial, commercial, residential, etc.)
 - Creating a set of rules for each of the building types to render them in 3D

- Completing 7,000 buildings
- Files are large
- Uses grammar to create the rules to render the buildings
 - 8 different rules – 1 for buildings without enough information to render the building
 - A lot of manual typing and learning of programming commands necessary
- Got help from Anthony Puzzo and Patrick Hagan, from Esri, on some of the initial scripting
- Scripts are text files and can be shared with others, can cut/paste code from these files
- Click on a building and can open up and access data from MDPV which has been linked with the building footprint
- Attributed buildings with the different classifications, a repeatable process, relatively easy
- Height information in MDPV allows to do more than some other resources have been able to provide
 - Can apply other representations beyond just height
- Can export to ArcGIS Online to share these efforts with a broader audience

Question: How long did it take to upload into ArcGIS Online

- Just a few minutes
- More time is needed to export the data into a format which can be uploaded to other resources
 - 7,000 buildings = about 8 million polygons which make up the parts and pieces of the buildings
- Pulled in CAMA data to add some of the additional details such as year built and some of the other structural data
- Search the attributes identified without having to set up a specific query, will zoom to the location requested

City of Rochester Example

- City of Rochester has also been working on CityEngine for their downtown area
 - Slider bar which is available to show before and after
 - Share the link, so others can view at their own pace
 - Can add bookmarks to the areas of interest within the uploaded CityEngine Web Scene within ArcGIS Online
 - Called a “CityEngine Web Scene” within ArcGIS Online
 - Can export bookmarks for sharing
 - Can export into .kml and .kmz files so it can be opened in other products like Google Earth
 - Some computers would not open the exported file because of size and capacity to handle larger files
- Issue with some of the building footprints
 - All of the vertices are in the planimetric data
 - Those that are not orthogonal had little discrepancies and permutations which were creating additional polygons, which were not useful for purposes of rendering the buildings in 3D
 - Digitization errors will be revealed, even a slight indentation shows errors in a “straight” line
 - CityEngine does a good job of straightening out some of these lines for the user
- Next Steps:
 - Visual data
 - Get a production workflow in place

- Processing and using the software is pretty slow
 - Exporting to Google or web viewers will make things easier
 - Would like to be able to rapidly deploy building polygons
 - Not at the quick point yet, because of data processing
 - Make sure buildings are there, buildings are closed, points are inside of the polygons are all cleaning that needs to be done before applying CityEngine
- Steep learning curve for the City Engine tool itself

Question: Is anyone else in Maryland currently using the CityEngine product?

- MNCPPC was looking at it, Baltimore City Housing Department., D.C. Planning Department looking at it, but not a large user base in the State of Maryland
- Next release of product is set for May/June or possibly sooner
- More GIS analysis type capabilities within CityEngine itself
- Integration of CityEngine pieces into core ArcGIS Desktop
 - New CGA sample files which allow for inclusion in the rules development
 - Learning curve to start out with, but each release it will get easier
 - City of Philadelphia using CityEngine a lot, 3D analysis and samples are from them
- Future licensing
 - Separate product, basic and advanced licensing
 - Main difference for advanced is that it brings in map services, shapefiles for viewing 3D data and sample data together
- Included in State ELA is 1 concurrent use license on Central License Manager

Question: Using raster textures to simplify some of the rendering?

- Can use rasters, graphics to drape over buildings
- Start with .jpgs and drape imagery over the buildings, as another alternative or a hybrid resource
- NAIP imagery draped in the background for the demonstrations
- 6" imagery file is too big to drape in the background within CityEngine

Question: What are the long-term policy implications?

- Visualize land cover
- Issue of sub-dividing or changing land use
- Do not have existing buildings and how do you create a building within the parcel and extrude to determine if septic considerations are made?
- How do you make recommendations on these types on zoning changes?
- Still being worked on and ideally addressed with CityEngine
- Show comparison of what Smart Growth looks like in an area, this seems like the right product to do that, just learning how to do this correctly
- Providing the end-user with exports to Google Earth and ArcGIS Online, not bringing CityEngine to a public hearing and trying to do anything within the software itself
- Production tool and visualization tools are others, outside of CityEngine

- There does seem to be a limit to the area that can be rendered at one time within the 3D environment
 - Add into the rules that once you zoom past a specific point it would jump back to 2D
 - Designed more for campus-sized areas
- Can also post onto internal servers and serve out
- End-user examples will be shared with the group
<http://maryland.maps.arcgis.com/apps/CEWebViewer/viewer.html?3dWebScene=1055237eee6d464f9b67d2cd3cf5fa5b>
- MDP can be a resource for those who want to start using this product
- Anticipate building a small community to share information on this product

MD iMap Executive Committee Meeting

ELA Statistics

- Maximum license utilization in March was 550 up from 498 in January (increase of 10%)
- Total number of users up from 413 to 482 users (increase of 17%)
- Interest in obtaining number of concurrent users within a particular agency (For example: MDP)
- Still looking for a matrix to provide some insight concerning capabilities at different levels of ArcGIS Desktop (View/Basic, Editor/Standard and Info/Advanced)

Data & Resources Subcommittee Updates

Addressing Initiative

- Data request letter went out to all local jurisdictions
- Currently scheduling statewide meetings
 - Trying to see three counties a day and has been a little challenging
 - Eastern Shore is scheduled and will be visited by next week
 - About to schedule Western Maryland counties
 - Now working on scheduling Southern Maryland counties
- Anticipating having statewide address data in May
- Had a good meeting with BMC and received positive feedback
- Looking to establish a standard
 - Many counties have had years of free-form entry and are looking for a tool to standardize by
- NENA workgroup have just been established for their next generation data model
- Want to leverage a group, NENA or another, to discuss a standard for Maryland
 - Martha Wells involved in formulating FGDC standard
 - Propose she come in and discuss the potential for Maryland standards
 - Do not want to make it overly complicated, but want to get it right
 - Local governments do see the value in a Maryland standard
 - Want to see the data first and try to develop a least cost path to an addressing standard
- Preparing for next addition of Maryland Property View (MDPV)
 - MDP is willing to change the structure and format of the field names, lengths, etc., in accordance with designated standard, but only going to do within the beginning of the refresh year
 - The refresh is coming up in the next month or two
- A lot of data owners are the 911 users and any standard must meet their needs

- They must consider standards of the software used for 911 dispatch and other related activities
- Overall response has been positive to date
- Link on the homepage of the Portal for this initiative (<http://imap.maryland.gov/portal/addressing.asp>)

Cascading Geocoder Update

- Awaiting approval to push to production server, anticipate being live within a week or two
- Ran monthly loans against the cascading geocoder, but was not able to geocode with just one component
 - Queried out the non-matches manually
 - Got a good, initial match rate
 - Geocoded Calvert Cliffs facility right away, for example, without the actual address included
- Have discovered in the desktop interface that place name gets substituted in for the address
- Batch geocode using place names will need to assign the field place names for the address field
- Define a geocoding service within ArcGIS Online
 - Esri's geocoder is the only option on the ArcGIS Online main interface
 - This might change in the future and accommodate Cascading Geocoder but not anticipated this year

Question: Should we offer our data again to Esri to include in their geocoding service?

- Upcoming enhancement is to swap out the geocoding service
- Portal solution already allows for this, but this is on an isolated network

Floodplain Discussion

- A number of mapping applications show floodplains
- It seems that floodplains should be considered a framework layer
- There are three applications pulling floodplain data
 - MDE flood mapper
 - MERLIN
 - OSPREY
 - Might be some others that are not known
- MD iMap map service for 100-year and 500-year floodplain is for the OSPREY application and do not think these layers are being kept up-to-date
 - Services on MD iMap are out-of-date and that is not good
- Floodplains are not working on MERLIN
 - Had been pointing to DFIRM resource and was not responding well
- Appears that the Flood Mapper for MDE is pulling from map services that MES is hosting
- Kind of a mess for those who want to use this data
- Mike Hershberger and Frank Siano have been having a chat about where the floodplain services should be hosted and a discussion about making them available via MD iMap
- MDE are the stewards of this data
- OSPREY floodplain services should be replaced with the more accurate floodplain services coming from MDE

Outreach Subcommittee Updates

- Anticipate moving the existing Portal to SharePoint at DoIT in May

Application Subcommittee Updates

Application Template

- Template is available for use from GitHub.com
- If you download the template via .zip function this will not include a library that powers the table of contents widget
 - Should instead create a clone or fork instead
- Use the issues list to report problems, so all users can be made aware of common issues and concerns
 - Protocol for fixing these issues: community-based effort or developers to be hired in the future
 - Hybrid approach to getting issues fixed and enhancements added
 - Mobile responsiveness needs to be worked on some more
- Living template to add more features/widgets in the future
- MDP has been working on making maps a few different ways, making them easy to use and easy to adjust
- Adding an individual layer into template through ArcGIS Online is fine, but if you try to use outside of ArcGIS Online will not work
- Outside of ArcGIS Online for Maryland, basemaps change from organizationally available basemaps to Esri default basemaps
- Going to WGS1984 for next generation of MD iMap, current version is staying at NAD83 MD State Plane
 - Available for people to test off of the DoIT servers, but not production servers yet
- Bought more RAM for the ArcGIS Server 10.1 migration
 - Hardware issues might have been accommodated, but software issues seem to persist
 - Keeping in mind the number of map services to be published
 - Request that MDP share their hardware specs with DoIT
- PFA map has been launched with the new template, along with new MERLIN and capital budget map

Google Map Engine

- Have decided to change the plan and go with Arc2Earth tool instead
- Anticipate some end of year money available for DoIT to make this purchase
- Will need to determine distribution and utilization amongst agencies

USDOT Cloud Utilization Survey

- Survey to States to see whether or not they are incorporating Cloud technologies
- Also with Mike Sheffer and Kaushik Dutta about what Cloud technologies we use
- Webex presentation about ArcGIS Online and the template
- Mike Sheffer talking about Salesforce which is also cloud-based
- Putting together a paper to share at GIST conference in the summer in Idaho

Esri International User Passes

- Contact DoIT GIO to obtain information to register for Esri UC using ELA complimentary passes

Additional Business

None at this time